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REMARKS

Status of the Claims

Claims 10-12 are pending. Claims 10-12 are rejected. Claims 1-9 and 13-16 were canceled previously and claim 11 is canceled herein. Claims 10 and 12 are amended. No new matter is added.

Claim amendments

Claim 10 is amended to overcome rejections under 35 U.S.C. §102(b) and §102(e). Claim 10 is amended to incorporate the limitation of the polypeptide having SEQ ID NO: 1 recited in claim 11. The claim is amended further to include a proviso statement that the monoclonal antibody may not bind only within a region of amino acids 1090 to 1378 of the polypeptide having SEQ ID NO: 1 for reasons discussed *infra*. Claim 11 is canceled and claim 12 is amended to properly depend from claim 10. No new matter is added.

Priority

The Examiner states that the instant application repeats a substantial portion of prior Application No. 08/801,308, filed February 18, 1997, now U.S. Pat. 6,368,790, and adds and claims additional disclosure not presented in the prior application. The Examiner draws Applicants' attention to page 25, ll. 9-10 of the instant specification, which the Examiner states, is added in the instant application. Applicants strongly disagree.

Applicants submit that the instant application was properly filed as a divisional application of prior application U.S.S.N. 08/801,308 under 37 C.F.R. 1.53(b). With the divisional transmittal a complete copy of the prior application, as originally filed, i.e., 32 pages specification, including the 16 claims originally filed, and 10 sheets of drawings, was enclosed. The originally filed prior application and the instant application both contain the incomplete sentence "The ATCC Accession Number for the monoclonal antibody is:" at ll. 9-10 on page 25. In fact, in the prior application 08/801,308, the Examiner for the '308 application states in Item 2 of Paper No. 16, the first action on the merits, that "The ATCC Accession number is blank on page 25. Appropriate correction is required".

Applicants are unsure if this is the only instance of added material to which the Examiner refers. As such, Applicants wish to point out that after the filing of the prior application, 08/801,308, pages 2-16 were misplaced and not included with the file when it was assigned to the Examiner. However, an examination of the file history of 08/801,308 would show the Examiner's acceptance of Applicants' documentation that all 32 pages of the specification originally were filed and received by the USPTO and substitute pages were provided subsequently.

Accordingly, Applicants submit that the instant application is a proper divisional application of 08/801,308 with no added material and is, therefore, entitled to claim priority to 08/801,308.

The 35 U.S.C. §112, second paragraph, rejection

Claim 12 stands rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection.

The Examiner states that claim 12 is drawn to an antibody designated C130 which is raised against an epitope not encoded by the instant SEQ ID NO: 2. The specification sheet on Santa Cruz Biotechnology catalog number sc-9962 states that M56 is raised against amino acids 73-909 of a protein not encoded by instant SEQ ID NO: 2. This is based on Applicants' statement in the response filed on November 5, 2002 that the antibody designated as C130 is identical to PACT(M56) sold by Santa Cruz Biotechnology, Inc.

Applicants apologize for the erroneous statements and any confusion surrounding the issue of the PACT(M56) and C130 antibodies. Despite the statement that C130 is identical to PACT(M56), made in U.S. Patent No. 6,368,790 B1 (col. 10, ll. 50-52), this is incorrect. M56 and C130 are similar monoclonal antibodies related in that they bind different epitopes in the polypeptide identified by SEQ ID NO: 1 which is encoded by an isolated DNA having the nucleotide sequence of SEQ ID NO: 2, but they are not identical. Thus, for purposes of providing a monoclonal antibody specific for P2P-R protein, they could be construed to be identical or at least interchangeable. As such, Applicants licensed M56 as a representative antibody and not C130.

Furthermore, the background provided by Santa Cruz Biotechnology about M56 is misleading. The University of Tennessee Research Corporation, as Assignees of the instant invention of record on Reel/Frame 9048/0457, licensed the M56 hybridomas to Santa Cruz Biotechnology. Santa Cruz Biotechnology, and not Applicants, renamed M56 as PACT(M56) and stated that M56 binds to murine PACT which is also known as P2P-R. This is misleading because PACT is a comparable gene to P2P-R and was cloned by someone other than the Applicants. Neither PACT nor its gene products were used to produce M56, C130 or other antibodies identified in the instant application. The P2P-R cDNA having SEQ ID NO: 2, which was cloned by Applicants, is homologous to PACT. The P2P-R protein of SEQ ID NO: 1, encoded by P2P-R cDNA having SEQ ID NO: 2 was used to produce M56, C130 and other antibodies.

The error is promulgated by Santa Cruz Biotechnology by stating that PACT(M56) is raised against amino acids 753-909 of PACT of mouse origin. This is incorrect. Applicants M56, or GST P2P (753-908) in the instant specification, was raised against amino acids 753-908 of P2P-R which is only homologous to PACT and therefore does not have SEQ ID NO:1. That is why the Examiner's search resulted in inconsistent matches. M56 will bind to PACT, but

at amino acids 766-921, because PACT is highly homologous to P2P-R. Applicants submit a copy of the results of a search done in August of 2000 using the National Institutes of Health/National Library of Medicine Website demonstrating homology between a P2P-R protein, where amino acids 1-1371 are identical to those in Applicant's P2P-R protein having SEQ ID NO:1, and PACT.

Thus, as recited in claims 10-12, C130 is an antibody that binds to a polypeptide with the sequence of SEQ ID NO:1 which is encoded by an isolated DNA having the sequence of SEQ ID NO: 2. Accordingly, in view of the arguments presented *supra*, Applicants respectfully request that the rejection of claim 12 under 35 U.S.C. 112, second paragraph, be withdrawn.

The 35 U.S.C. §102(b)/§102(e) rejections

Claims 10 and 11 are rejected for reasons of record under 35 U.S.C. 102(b) as being anticipated by either **Minoo** *et al.* (*The Journal of Cell Biology*, Vol. 109, pp. 1937-1946, Nov. 1989) or **Witte** *et al.* (1993, *Mol. Cell. Differ.* Vol. 2, pp. 185-195). Claims 10 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by **Fisher** *et al.* (U.S. Patent No. 5,634,761).

The Examiner states that **Minoo** *et al.* teach that antibodies iD2, fA12 and AC88 bind to P2P protein products (pg. 1938, left col. second paragraph from bottom; Fig. 1-8). The Examiner also states that the specification teaches that cloning the P2P cDNA of SEQ ID NO: 2 which encodes the protein of SEQ ID NO: 1 was possible because AC88 and fA12 taught by **Minoo** *et al.* produced clone A and clone B which are two halves of the instant P2P cDNA (pg. 17, ll. 12-23). Additionally, the Examiner states **Witte** *et al.* teach that AC88 binds to P2P. Furthermore, the Examiner states that **Fisher** *et al.* teach antibodies that bind to P2P (col. 4, ll. 44-51; Figure 14). The Examiner requires that Applicants demonstrate the instant monoclonal antibodies are patentably distinct from those disclosed in the prior art.

With regard to teaching antibodies that bind to P2P in **Minoo** *et al.* and **Witte** *et al.*, the Examiner is correct. **Fisher** *et al.* teach that the experimental details for determining P2Ps are found in **Minoo** *et al.* and **Witte** *et al.* as cited herein, thus **Fisher** *et al.* teach the same antibodies as **Minoo** *et al.* and **Witte** *et al.* (col. 4, ll. 49-51; col. 78, ll. 9-18).

Applicants invention is drawn generally to monoclonal antibodies that bind to a polypeptide having SEQ ID NO:1 encoded

by an isolated DNA having SEQ ID NO:2. Applicants screened a 3T3 cDNA library by first probing with AC88 and then probing the AC88 positive clones with fA12. Two clones, clone A and clone B, were positive for both AC88 and fA12 binding. The last 863 base pairs at the 3' end of clone A and the first 863 base pairs at the 5' end of clone B were 100% homologous and therefore, it is within the region of the encoded protein corresponding to the 863 base pair region that both AC88 and fA12 must bind because both clones bound both AC88 and fA12. The overlapping regions of clone A and clone B were joined to form a 2478 bp nucleotide with a 1658 base pair open reading frame and 820 bp of 3' untranslated region (pg. 17, ll. 11 to pg. 18, ll. 2).

An additional 2695 bases were added to the 5' end to form a 5173 base pair P2P cDNA with SEQ ID NO:2 (pg. 18, ll. 3-20). Thus, the original 1-2478 bp now correspond to bp 2695-5173 in SEQ ID NO:2 with the open reading frame corresponding to bp 2695-4353. The original 863 bp in clones A and B now correspond to bp 3270-4133. Base pairs 139-4353 encode the polypeptide of SEQ ID NO:1 having 1404 amino acids (pg. 18, ll. 21 to pg. 19, ll. 4; Figs. 1-2). Therefore, bp 3270-4133 encode amino acids 1090-1378 of

polypeptide SEQ ID NO:1 which is the segment of the polypeptide binding both AC88 and fA12 antibodies.

Applicants have amended claim 10 and canceled claim 11, as discussed *supra*, to include a proviso statement excluding antibodies binding only within the 1090-1378 segment of the polypeptide SEQ ID NO:1. Applicants submit this is proper because amended claim 10 is a composition claim encompassing more than one monoclonal antibody binding to a specific polypeptide with known sequence. As the instant specification teaches that AC88 and fA12 bind to a specific region within this polypeptide, it is proper to exclude these antibodies in the claim.

With regard to the iD2 antibody taught in **Minoo** *et al.*, the reference teaches that antibodies iD2 and fA12 are raised against hnRNP proteins, but that in contrast fA12 recognizes a group of hnRNP proteins that are mostly different from those recognized by iD2 (pg. 1941, second col., ll. 16-21). Additionally, **Minoo** *et al.* teach that detection of P2Ps is specifically dependent on the presence of AC88 or fA12 antibodies since the omission of these antibodies failed to detect P2Ps (pg. 1940, first col., ll. 7-10). Thus, iD2 would not bind to polypeptide SEQ ID NO:1 because it binds proteins different from fA12 and fA12 is used to detect polypeptide

SEQ ID NO:1. Therefore **Minoo** *et al.* does not anticipate the instant monoclonal antibodies recited in amended claim 10.

Witte *et al.* teach the same AC88 antibody as **Minoo** *et al.* **Fisher** *et al.* incorporate the teachings of **Witte** *et al.* and **Minoo** *et al.* to teach the same AC88 and fA12 antibodies. Therefore, for the same reasons discussed *supra*, amended claim 10 is not anticipated by **Witte** *et al.* nor **Fisher** *et al.* Accordingly, in view of the claim amendments and arguments presented herein, Applicants respectfully request that the rejection of claims 10-11 under 35 U.S.C. §102(b) & (e) be withdrawn.

On sale Bar

Because of the confusion over the PACT(M56) and C130 antibodies and that PACT(M56) appears to bind to a protein encoded by a cDNA that is not Applicants' P2P cDNA having SEQ ID NO:2 and that was disclosed by another, the Examiner has requested Applicant to provide information showing who invented "C130" as claimed in the instant claim 12, and (2) when "C130" became commercially available.

As discussed *supra* in overcoming the 35 U.S.C. §112, second paragraph, rejection, M56 and C130 are distinct monoclonal

antibodies both binding to Applicants' polypeptide SEQ ID NO:1 encoded by P2P cDNA SEQ ID NO:2 and Santa Cruz Biotechnology misleadingly named M56 as PACT(M56). To reiterate, M56 will bind to PACT because PACT, although a different cDNA, is significantly homologous to P2P-R cDNA which is Applicants' SEQ ID NO:2.

Santa Cruz Biotechnology signed the License Agreement with The University of Tennessee Research Corporation on September 24, 1999. Thus, M56 was not commercially available prior to that date which is after the February 18, 1997 filing date of the parent 08/801,308 application to which Applicants maintain a right for the instant application to claim priority as a divisional application thereof. C130 was not licensed and not commercially available nor had a deposit of the C130 hybridoma been made. Therefore, an on sale rejection under 35 U.S.C. 102(b) can not be made against the instant claims 10-12.

This is intended to be a complete response to the Final Office Action mailed September 10, 2003. If any issues remain outstanding, the Examiner is respectfully requested to telephone the undersigned attorney of record for immediate resolution.

Applicant includes a Petition for a Two Month Extension of Time under 37 C.F.R. 1.136. Please debit the $210 petition fee

under 37 C.F.R. 1.17(a)(2) or any additional applicable fees from Deposit Account No. 07-1185 on which the undersigned is allowed to draw.

Respectfully submitted,

Date: Feb 9, 2004

Benjamin Aaron Adler, Ph.D., J.D.
Registration No. 35,423
Counsel for Applicant

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LICENSE AGREEMENT
between
The University of Tennessee Research Corporation
and
Santa Cruz Biotechnology, Inc.

THIS AGREEMENT, effective on the last date of execution hereof, by and between The University of Tennessee Research Corporation (hereinafter referred to as UTRC), having an office at 1534 White Avenue, Suite 403, Knoxville, Tennessee 37996-1527, and Santa Cruz Biotechnology, Inc., a Delaware Corporation having an office at 2161 Delaware Avenue, Santa Cruz, California 95060 (hereinafter referred to as SCB).

WITNESSETH:

WHEREAS, UTRC owns exclusive rights in monoclonal hybrid cell lines which are suitable for the production of monoclonal antibodies;

WHEREAS, SCB desires to obtain such monoclonal hybrid cell lines to produce, supply and sell monoclonal antibodies resulting therefrom;

WHEREAS, UTRC is willing to supply either directly or through The University of Tennessee SCB with such hybridoma cells and to grant SCB with such monoclonal hybrid cells upon the terms and conditions hereinafter set forth;

NOW, THEREFORE, in consideration of the mutual convenants herein recited, the parties hereto intending to be legally bound hereby agree as follows:

PART 1 - DEFINITIONS

1.1 "Clones" shall mean the hybridoma cells developed by Dr. Robert Scott, at The University of Tennessee, listed as follows:

(a) "M56" produces anti-P2PR monoclonal antibody

1.2 "Licensed Products" shall mean monoclonal antibodies resulting from the Clones.

1.3 "Licensed Field of Use" shall mean the research products market only (not for therapeutic or diagnostic applications).

1.4 "First Sales Date" shall mean the date on which SCB first sells or transfers a Licensed Product to a third party.

1.5 "Net Proceeds of Sales" shall mean the sum total of all charges invoiced by SCB with respect to Licensed Products less: (i) normal trade and cash discounts actually allowed (excluding promotional, advertising, and other non-normal or specific discounts); (ii) credits or refunds actually allowed for spoiled, damaged, outdated, or returned goods; (iii) sales and other excise taxes imposed and paid directly with respect to the sale; and (iv) transportation costs to the extent separately invoiced. A sale shall be deemed to have taken place when a Licensed Product is invoiced and paid for. In the event that SCB uses Licensed Products in the production of other

products for eventual sale, the Net Proceeds of Sales of the Licensed Products so used will be calculated as if such Licensed Products had been sold directly using SCB's normal accounting and pricing practices for similar or like products.

1.6 "**GPR**" means any requirements, conditions, or regulations that the U.S. Government granting agencies impose on UTRC or its grants or grant applications including but not limited to 35 U.S.C. SS 200-211 and regulations contained in 37 CFR Part 401 (published in the Federal Register of March 18, 1987 on Page 8552) as modified by Executive order No. 12618 of December 22, 1987 (published in the Federal Register of December 22, 1987) and modifications thereto hereafter adopted by any agency of the U.S. Government.

1.7 "**Confidentiality Information**" shall be information relating to Licensed Products that is transmitted in writing by UTRC to SCB and marked "confidential", but shall not include information that

1. is already known to SCB; or

2. at the time of disclosure is in the public domain; or

3. is information which, after the date of disclosure, lawfully becomes a part of the public domain other than through disclosure by SCB, or

4. is received from a third party having a legal right to disclose the same.

PART 2 - LICENSE AND SUPPLY OF CELLS

2.1 Subject to the terms and conditions of this Agreement, UTRC hereby grants SCB a non-exclusive world-wide license to make, use, sell, lease and otherwise deal in Licensed Products solely in the Licensed Field of Use.

2.2 Subject to Paragraph 2.11 and 2.12 of this Agreement, UTRC will supply or cause to be supplied with cells reasonably capable of reproducing the Clones. The Clones will be established by SCB when the monoclonal hybrid cells grown in cell culture are able to generate ascites with IgG of the predetermined specifically in mice. In the event that SCB is unable to establish such Clones and subject to Paragraph 2.4 and 2.12 of this Agreement, UTRC will reasonably resupply the hybrid cells to the extent that UTRC has them in its possession. THE CLONES FURNISHED BY UTRC HEREUNDER ARE FOR USE BY SCB SOLELY FOR CARRYING OUT THE LICENSE GRANTED HEREIN AND WILL NOT BE TRANSFERRED IN ANY MANNER TO A THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF UTRC.

2.3 SCB shall pay UTRC:

(a) A license fee of Two Thousand Dollars ($2,000) for the initial supply of cells included in the Clones as supplied to SCB under paragraph 2.2.

(b) A royalty of five percent (5%) of the Net Proceeds of Sales of Licensed Products sold anywhere by SCB, for a period of fifteen (15) years from the First Sales Date of each Licensed Product. The license granted herein will be renewable at the end of said period.

2.4 The Clones are provided to SBC WITHOUT WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED. UTRC MAKES NO REPRESENTATION OR

WARRANTY THAT THE USE OF THE MATERIAL WILL NOT INFRINGE ANY PATENT OR OTHER PROPRIETARY RIGHT. IF THE CLONES ARE UNABLE TO PRODUCE ANTIBODIES IN MICE OR IN CELL CULTURE THEN THE EXTENT OF SCB's REMEDY AGAINST UTRC IS LIMITED TO A REFUND OF THE SUMS PAID BY SCB TO UTRC UNDER PARAGRAPH 2.3(A) OF THIS AGREEMENT.

2.5 (a) Royalty payments based on Net Sales as hereinabove required to be made by SCB to UTRC shall be made in United States Dollars within sixty (60) days following each calendar year. Each such payment shall include the royalties which shall have accrued during the calendar year immediately preceding and shall be accompanied by a report setting forth separately the Net Proceeds of Sales of a Licensed Product sold during said calendar year.

(b) The remittance of royalties payable on Net Proceeds of sales of Licensed Product outside the United States shall be made to UTRC in United States Dollars at the official rate of exchange of the currency of the country from which the royalties are payable (as quoted by Citibank N.A. for the last business day of the calendar year, in which the royalties are payable) less any withholding or transfer taxes which are applicable. SCB shall supply UTRC with proof of payment of such taxes paid on UTRC's behalf and shall co-operate with UTRC by giving such assistance as may be reasonably necessary in obtaining credit or refund of any such taxes.

(c) SCB shall keep and maintain records of sales made pursuant to the license granted hereunder. Such records shall be open to inspection at any reasonable time during normal business hours not more often than once each calendar year within three (3) years after the royalty period to which such records relate by Certified Public Accountant selected by UTRC, to whom SCB has no reasonable objection, who shall have the right to examine and make abstracts of the records kept pursuant to this Agreement and report findings of said examination of records to UTRC insofar as it is necessary to evidence any mistake or impropriety on the part of SCB.

2.6 (a) UTRC and SCB recognize and hereby acknowledge that the Licensed Products may have been made in the course of research carried out under a grant or award which is governed by the GPR. UTRC and SCB affirm their intent to comply with applicable regulations relating technologies developed under the GPR and more specifically as follows:

(b) SCB agrees to use all reasonable efforts to effect introduction of Licensed Products into the commercial market as soon as practicable, consistent with sound and reasonable business practices and judgment. To this end, SCB shall as soon as practicable after it has been determined that a Licensed Product has commercial potential, design an evaluation and development plan for such Licensed Product.

2.7 Neither this Agreement nor any part(s) thereof are to be construed as at variance with or in derogation of any statutory or contractual rights of the United States Government or any department, commission or agency thereof and the parties hereto assert and declare that it is their mutual intent to recognize such prior rights.

2.8 For a period of five years from the date of initial receipt of Confidential Information, SCB will not disclose Confidential Information to a third party, and shall establish such safeguards against accidental disclosure to a third party as it establishes for its own proprietary information.

2.9 (a) Except as required by law, neither UTRC nor SCB shall originate any publicity, news release, or other promotional announcement, written or oral, whether to the public press, to stockholders, or otherwise, relating to this Agreement or any amendment hereto or to performance hereunder or the existence of any arrangement between the parties without prior written approval of the other party.

(b) SCB shall not use the name of "UTRC" or "The University of Tennessee" (or any variant thereof or any related organization) in any advertising, packaging or other promotional material in connection with the sale of Licensed Product pursuant to this Agreement without prior written consent from UTRC.

2.10 SCB acknowledges that it has certain duties and obligations under Part 379 of the Export Administration Regulations of the U.S. Department of Commerce (as presently promulgated or hereafter modified or amended) concerning the export of technical data. SCB will be solely responsible for any breach of such Regulations by SCB and will defend and hold UTRC harmless in the event of a suit or action involving UTRC occasioned by any such breach in so far as these are related to the Licensed Products.

2.11 This Agreement can be terminated by SCB at any time upon written notice to UTRC; in the event of such termination SCB will promptly return all Clones and other cell lines furnished to SCB by UTRC under Paragraph 2.2 hereof and promptly pay UTRC all royalties and other payments due and payable up to the effective date of such termination. SCB shall have the right for a period of six (6) months to sell any Licensed Product in inventory at the time of said termination and shall pay royalties to UTRC upon the sale of such Licensed Product in accordance with Paragraph 2.3(b) hereof.

2.12 This Agreement can be terminated by UTRC for any reason at any time prior to the delivery of viable Clones under Paragraph 2.2 of this Agreement.

2.13 Either party may terminate this Agreement and the licenses herein granted upon the breach of any of the terms herein contained by either party up on ninety (90) days written notice; provided that if during ninety (90) days the party so notified cures the breach complained of then this Agreement shall continue in full force and effect.

2.14 If the performance of this Agreement or of any obligation thereunder by either party is impeded by reasons of a force majeure such as war, revolution, riot, civil commotion, blockage, embargo, act or restraint of government, strike, lock-out or damage by fire or flood or by reason of any other circumstance beyond its control, the party so affected shall, upon giving notice to the other, be excused from such performance to the extent such force majeure necessitates provided that it shall use its reasonable endeavors to avoid or remove or minimize the cause of non-performance and shall continue performance of its obligations under this Agreement with the utmost dispatch whenever such force majeure shall be removed.

2.15 This Agreement is unassignable by either party except with the prior written consent of the other and except that it may be assigned without consent to a corporate successor of SCB or UTRC or to a person or corporation acquiring all or substantially all of the business and assets of the division or divisions of SCB involved in the development and sale of Licensed Products. Notwithstanding the foregoing, UTRC may assign its rights hereunder to a corporate affiliate, division, successor or The University of Tennessee.

2.16 SCB hereby indemnifies and holds UTRC harmless from and against all claims, causes of action, suits, damages and cost arising out of or resulting from the manufacture, sale and use of Licensed Products by SCB, provided that UTRC shall promptly notify SCB in writing of any suit or action for which such indemnity is sought.

2.17 This Agreement, its interpretation, and any controversy or claim arising therefrom, will be governed by the laws of the State of Tennessee. Any disputes hereunder shall be settled by arbitration in accordance with the rules of the American Arbitration Association, such arbitration to

be held in the State of Tennessee with any resulting award enforceable by either party in any court of competent jurisdiction wherever located.

2.18 In the event of a judicial proceeding concerning the construction, compliance with enforcement of the terms and conditions of this Agreement, the parties expressly submit to the jurisdiction and competence of the federal and state courts in the State of Tennessee, and expressly waive any other judicial forum or venue to which they may be entitled by reason of domicile, residence or otherwise The foregoing submission by the parties to the jurisdiction and competence of the courts of the State of Tennessee shall in no way prejudice or affect the right of either party to enforce any such judgment or any arbitral award in any court of competent jurisdiction, wherever located.

2.19 All notices to be given by each party to the other shall be made in writing by Registered or Certified Mail, return receipt requested, and addressed, respectively, to the parties at the following:

THE UNIVERSITY OF TENNESSEE RESEARCH CORPORATION
1534 White Avenue, Suite 403
Knoxville, Tennessee 37996-1527

SANTA CRUZ BIOTECHNOLOGY, INC.
2161 Delaware Avenue
Santa Cruz, California 95060

Any notice shall be effective as of its date of receipt.

2.20 (a) This Agreement constitutes the entire agreement between the parties and superseded all written and oral prior agreements or understandings. No variation or modification of the terms or provisions of this agreement shall be valid unless in writing and signed by the parties hereto.

(b) No right or license is granted by UTRC under this Agreement to SCB, or by SCB to UTRC, either expressly or by implication, except those specifically set forth herein.

(c) Waiver by SCB or UTRC of any single default or breach or succession of defaults or breaches by the other shall not deprive UTRC or SCB of any right to terminate this Agreement arising out of any subsequent default or breach.

(d) All matters affecting the interpretation, validity, and performance of this Agreement shall be governed by the laws of the State of Tennessee applicable to agreements made and to be performed wholly within such state but the scope and validity of UTRC patent rights shall be governed by applicable U.S. law.

IN WITNESS WHEREOF, UTRC and SCB have caused this Agreement to be executed in duplicate by their respective duly authorized officers.

THE UNIVERSITY OF TENNESSEE
RESEARCH CORPORATION

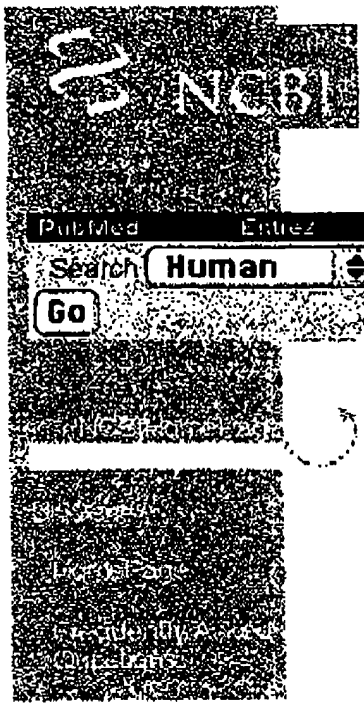
By: _____
Ann J. Robertson, Esq.
President

Date: 8-25-99

SANTA CRUZ
BIOTECHNOLOGY, INC.

By: _____
Renee D. White, Ph.D.
Director, Technical Service
Technology Licensing

Date: 9/24/99



UniGene

Homo sapiens
Retinoblastoma-binding protein 6

Hs.85273 *Homo sapiens* RBBP6

switch to text mode

Retinoblastoma-binding protein 6

PART AND RAPR ARE COMPARABLE. PART WAS CLONED BY A COMPETING ROSENFELD GROUP IN ISRAEL.

SEE ALSO

LocusLink: 5930
OMIM: 600938
HomoloGene: Hs.85273

SELECTED MODEL ORGANISM PROTEIN SIMILARITIES
organism, protein and percent identity and length of aligned region

***H. sapiens*:**	PIR:A57640 - A57640 retinoblastoma protein-binding protein RBQ-1 - human	**100 % / 947 aa**	High Homology at Protein Level!
***M. musculus*:**	PID:g1546779 (PACT)	**88 % / 908 aa**	
***R. norvegicus*:**	PID:g2828710 - matrin cyclophilin	**23 % / 393 aa**	
***D. melanogaster*:**	PID:g4972740 - unknown	**24 % / 697 aa**	
***C. elegans*:**	PID:g3876805 - similar to Zinc finger, C3HC4 type	**33 % / 234 aa**	
***S. cerevisiae*:**	PID:g609392 - Vrp1p	**26 % / 264 aa**	

MAPPING INFORMATION

Chromosome: 16
Cytogenetic Position: 16p12-p11.2
Gene Map 98: Marker stSG38987 , Interval D16S417-D16S420

EXPRESSION INFORMATION

cDNA sources: Brain, Breast, Colon, Eye, Foreskin, Germ Cell, Heart, Kidney, Placenta, Prostate, Spleen, Stomach, Thymus, Uterus, Whole embryo, uterus
SAGE : Gene to Tag mapping

Page 1 of 3

Entrez-Protein

NCBI Protein

PubMed Nucleotide Protein Genome Structure PopSet

Search Protein for P2Q-R (Related sequences) Go Clear

Limits Preview/Index History Clipboard

About Entrez

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Entrez Protein
Help | FAQ

Show: 20 Items 1-20 of 4527 Page 1 of 227 Select page: 1 2 3 4 5 6 7 8 9 10 >>

Retrieve large data sets

Check sequence revision history

How to create WWW links to Entrez

Related resources
BLAST

Reference sequence project

Locus Link

Clusters of orthologous groups

Protein reviews on the web

1: AAC72432 PubMed, Related Sequences, Nucleotide
proliferation potential-related protein [Mus musculus]
gi|3858885|gb|AAC72432.1|[3858885]

2: AAB49620 Related Sequences, Nucleotide
PACT [Mus musculus]
gi|1546779|gb|AAB49620.1|[1546779]

3: NP_008841 PubMed, Related Sequences, Nucleotide
retinoblastoma-binding protein 6 [Homo sapiens]
gi|5902044|ref|NP_008841.1|[5902044]

4: A57640 PubMed, Related Sequences
retinoblastoma protein-binding protein RBQ-1 - human
gi|2136108|pir||A57640[2136108]

5: CAA59445 PubMed, Related Sequences, Nucleotide
RB protein binding protein [Homo sapiens]
gi|755748|emb|CAA59445.1|[755748]

6: AAF59460 PubMed, Related Sequences, Nucleotide
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7: Q08696 PubMed, Related Sequences
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8: CAA51876 PubMed, Related Sequences, Nucleotide
mst101(2) [Drosophila hydei]
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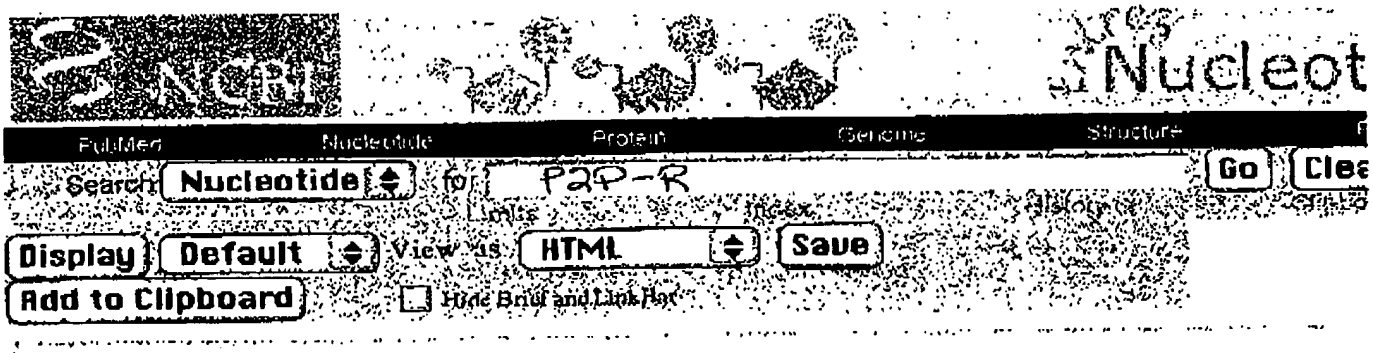
9: T13564 Related Sequences
microtubule-associated protein homolog - fruit fly (Drosophila

Highest Homology



1 : GI = "3858884" [GenBank] Mus musculus proliferation ... Related Articles Protein Nucleotide

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DEFINITION  Mus musculus proliferation potential-related protein (P2P-R) mRNA,
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ACCESSION   U83913
VERSION     U83913.1  GI:3858884
KEYWORDS    .
SOURCE      house mouse.
  ORGANISM  Mus musculus
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            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 5131)
  AUTHORS   Witte,M.M. and Scott,R.E.
  TITLE     The proliferation potential protein-related (P2P-R) gene with
            domains encoding heterogeneous nuclear ribonucleoprotein
            association and Rb1 binding shows repressed expression during
            terminal differentiation
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 94 (4), 1212-1217 (1997)
  MEDLINE   97188447
REFERENCE   2  (bases 1 to 5131)
  AUTHORS   Witte,M.M. and Scott,R.E.
  TITLE     Direct Submission
  JOURNAL   Submitted (06-JAN-1997) Pathology, University of Tennessee Memphis,
            800 Madison Avenue, Memphis, TN 38163, USA
REFERENCE   3  (bases 1 to 5131)
  AUTHORS   Witte,M.M. and Scott,R.E.
  TITLE     Direct Submission
  JOURNAL   Submitted (10-NOV-1998) Pathology, University of Tennessee Memphis,
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  REMARK    Sequence update by submitter
COMMENT     On Nov 10, 1998 this sequence version replaced gi:1899066.
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